

Nuclear Waste Program  
Hanford Project  
Dangerous Waste compliance Inspection

Procedural Closure of Physical and Chemical Treatment Test Facilities  
and  
Thermal Treatment Test Facilities

Inspection Report Date: September 15, 1995

Clarification of Issues and Recommendations Developed in the Inspection Report  
Supporting Discussion Contained in Administrative Record: PNL Non-Operational Units  
Unit Manager Meeting Minutes for September 20, 1995)

October 12, 1995

Page, Section, Comment

**Page 5, ISV Test Site.** Jerry Yokel, NWP Chemist, is reviewing the "Underground Tank Vitrification: A Pilot-Scale In Situ Vitrification Test of a Tank Containing a Simulated Mixed Waste Sludge". The document is being evaluated for equivalency with RCRA closure standards (methods, analytical levels, and constituents). This review will be complete October 31, 1995.

**Page 5, Management of Vitrified Mass.** Vitrified material from the pilot-scale test was exhumed but not removed from the site. The vitrified material is expected to be disposed of as solid waste. Ecology is coordinating with EPA to incorporate the ISV site into the 300-FF-2 past practice operable unit. Confirmatory sampling and analysis, and site restoration will be conducted concurrently with the operable unit to ensure protection of human health and the environment while maximizing cost and administrative efficiency.

**Page 6, Past Practice at ISV Site.** The inspection report claims that Mr. Timmerman's statement [contained in internal PNL certifications] is not consistent with Mr. Ja-Kael Luey's statement that only one test involving chemical constituents occurred at the ISV site.

The intent of certifications was to identify activities conducted at the site over the duration of interim status. Mr. Luey certified only for activities conducted during the period of his involvement with the ISV site. Mr. Luey did not join PNL until around 1990 therefore he would have only limited knowledge of activities conducted prior to this date. Mr. Timmerman's certification was intended to cover the period prior to Mr. Luey's involvement at the ISV site.

In addition, the TPA classifies the ISV site as a CERCLA past practice unit within the 300-FF-2 operable unit and also as a RCRA TSD. The Part A for the Thermal Treatment Test Facility was filed May 1988. Events may have occurred prior to the establishment of interim status, or outside of the defined TSD unit boundary. Pre-1988 activities, the TSD and adjacent areas will be addressed in coordination with the 300-FF-2 operable unit.

**Page 8 & 9, Biological Treatment Test Facilities in 324 Building.** The inspection report discusses the "pit tank" area located next to rooms 22A/B and requires the status of these tanks to be determined. PNL has provided the following information in response to the request:

A PNL memo regarding the "Management of Condensate in 324 Tank Pit Tanks" dated September 22, 1995. According to the memo condensates collected in the 324 Building tanks pit tanks (TK 16 and TK 20) are handled as test solutions and reused to the extent possible for secondary testing or as makeup



solutions for subsequent vitrification experiments. All of the systems, including the pit tanks, are hardpiped together. Following concentration, the condensate has been stored as feed test material in the 3718G warehouse prior to use as feed material. At completion of the experiments the resulting waste streams are disposed of as dangerous or non-dangerous waste according to process knowledge and/or analytical results.

**Page 9, Summary of Conclusions and Recommendations, 116-B-6-1 Crib.** The ISV test was performed as a technology demonstration under the EPA's guidance for RI/FS treatability studies under CERCLA. Remediation of the 116-B-6-1 will be managed under CERCLA as part of the 100-BC-1 Operable unit.

**Page 9, Summary of Conclusions and Recommendations, ISV Test Site.** Jerry Yokel, NWP Chemist, is reviewing the "Underground Tank Vitrification: A Pilot-Scale In Situ Vitrification Test of a Tank Containing a Simulated Mixed Waste Sludge". The document is being evaluated for equivalency with RCRA closure standards (methods, analytical levels, and constituents). This review will be complete October 31, 1995.

The intent of certifications were to identify activities conducted at the site over the duration of interim status. The TPA classifies the ISV site as both a CERCLA past practice unit within the 300-FF-2 operable unit and as a RCRA TSD. The Part A for the Thermal Treatment Test Facility was filed May 1988. Events may have occurred prior to the establishment of interim status, or outside of the defined TSD unit boundary. Pre-1988 activities, the TSD area and adjacent areas will be managed as part of the 300-FF-2 operable unit. Confirmatory sampling and analysis, and site restoration for the ISV site will be conducted concurrently with the operable unit to ensure protection of human health and the environment while maximizing cost and administrative efficiency.

**Page 9, Summary of Conclusions and Recommendations, 324 Building Facilities.** The inspection report discusses the "pit tank" area located next to rooms 22A/B and requires the status of these tanks to be determined. PNL has provided the following information in response to the request.

A PNL memo regarding the "Management of Condensate in 324 Tank Pit Tanks" dated September 22, 1995. According to the memo condensates collected in the 324 Building tanks pit tanks (TK 16 and TK 20) are handled as test solutions and reused to the extent possible for secondary testing or as makeup solutions for subsequent vitrification experiments. All of the systems, including the pit tanks, are hardpiped together. Following concentration, the condensate has been stored as feed test material in the 3718G warehouse prior to use as feed material. At completion of the experiments the resulting waste streams are disposed of as dangerous or non-dangerous waste according to process knowledge and/or analytical results.

To date no evidence has indicated that the tanks ever functioned as dangerous waste storage tanks. The Part A only allows for treatment, not storage or disposal. If at any time it is determined that these tanks operate as greater than 90 day storage tanks, RCRA permitting or closure will be required.

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